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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,725

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Koichi Hasegawa

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EXAMINER

MORILLO, JANELLE COMBS

ART UNIT

PAPER NUMBER

1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,725	Applicant(s) HASEGAWA ET AL.	
	Examiner Janelle Morillo	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>102908</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schatz et al (US 2,719,085).

Schatz teaches an Ag alloy with 96.97% Ag, 3% Si, and 0.03% P (column 2 line 48), which falls within the presently claimed ranges.

Concerning the preamble limitation of “a thin film-forming sputtering target”, the term “sputtering target material” in the instant claim does not impart any specific physical configuration to the claimed material, and therefore the prior art material is held to be as useful in sputtering targets as is the claimed material. The phrase “thin film forming” is held to be an intended use of said alloy. The Ag alloy of identical composition is inherently held to be as “high reflectance” as the instant alloy. Because Schatz teaches an example within the presently claimed alloying ranges, it is held that Schatz anticipates the instant invention.

Concerning claim 4, though the example of Schatz does not fall within the instantly claimed range, Schatz teaches that 0.01-0.5% Cu and 0.01-0.2% Ni (column 1 lines 61-63), which completely falls within the claimed range of 0.01-5%. Therefore, because Schatz teaches (narrow) ranges that overlap the instant ranges “with sufficient specificity” (see MPEP 2131.03), it is held that Schatz anticipates the instant claims.

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3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hensel (US 2,450,340).

Hensel teaches a silver alloy with added phosphorus, and in particular, containing (in weight%): 0.001-1% P, 0.25-20% Pt and Pd, 0.001-0.5% Ni, Co, and Fe (column 1 lines 47-55). Hensel further teaches an example within the instantly claimed ranges with 0.04% P (column 2 line 31).

Concerning the preamble limitation of “a thin film-forming sputtering target”, the term “sputtering target material” in the instant claim does not impart any specific physical configuration to the claimed material, and therefore the prior art material is held to be as useful in sputtering targets as is the claimed material. The phrase “thin film forming” is held to be an intended use of said alloy. The Ag alloy of identical composition is inherently held to be as “high reflectance” as the instant alloy. Because Hensel teaches an example within the presently claimed alloying ranges, it is held that Hensel anticipates the instant invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schatz and further in view of ASM Handbooks Online, Vol. 5 Surface Engineering, p 1.

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Schatz does not mention a thin film formed of the Ag alloy. However, ASM Vol 5 teaches that sputtering is well known to produce thin films of an unlimited source of metals and metal alloys (p. 1). It would have been obvious to one of ordinary skill in the art to have formed the alloy taught by Schatz into a thin film sputtered from the Ag alloy of Schatz, because ASM Vol 5 teaches that sputtering is well known to produce thin films of such metal alloys (p. 1).

Changes in size, shape, or sequence of adding ingredients is prima facie obvious in the absence of new or unexpected results (see MPEP 2144.04).

6. Claims 3, 4, 7, 9, 11, 12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hensel.

Hensel teaches an alloy for metal evaporation, for coating a thin film (column 2 lines 11-12, 18-19). Hensel teaches a silver alloy with added phosphorus, and in particular, containing (in weight%): 0.001-1% P, 0.25-20% Pt and Pd, 0.001-0.5% Ni, Co, and Fe (column 1 lines 47-55), which overlaps the claimed alloying ranges in instant claims 3, 4, 7, 9.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. Additionally, "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages," *In re Peterson*, 65 USPQ2d at 1379 (CAFC 2003).

Because Hensel teaches an overlapping alloy composition, it is held that Hensel has created a prima facie case of obviousness of the presently claimed invention.

Concerning claims 11, 12, 15, as sated above, Hensel teaches forming a thin film of said alloy.

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7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldsmith (US 2,310,231).

Goldsmith teaches a silver alloy with added phosphorus, and in particular, containing (in weight%): 0-1.5% P, 0-50% Cu, 0-35% Zn (column 1 lines 55-60), and wherein gold can replace some of the silver (column 2 lines 10-11), which broadly overlaps the composition in instant claims 1-8.

Concerning the preamble limitation of “a thin film-forming sputtering target”, the term “sputtering target material” in the instant claim does not impart any specific physical configuration to the claimed material, and therefore the prior art material is held to be as useful in sputtering targets as is the claimed material. The phrase “thin film forming” is held to be an intended use of said alloy. The Ag alloy of identical composition is inherently held to be as “high reflectance” as the instant alloy. Because Goldsmith teaches alloying ranges that broadly overlap the presently claimed alloying ranges, it is held that Goldsmith has created a prima facie case of obviousness of the presently claimed invention.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. Additionally, "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages," In re Peterson, 65 USPQ2d at 1379 (CAFC 2003).

8. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldsmith (US 2,310,231) and further in view of ASM Handbooks Online, Vol. 5 Surface Engineering, p 1.

Goldsmith is discussed in paragraphs above. Goldsmith does not mention a thin film formed of the Ag alloy. However, ASM Vol 5 teaches that sputtering is well known to produce

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thin films of an unlimited source of metals and metal alloys (p. 1). It would have been obvious to one of ordinary skill in the art to have formed the alloy taught by Goldsmith into a thin film sputtered from said Ag alloy, because ASM Vol 5 teaches that sputtering is well known to produce thin films of such metal alloys (p. 1).

Changes in size, shape, or sequence of adding ingredients is prima facie obvious in the absence of new or unexpected results (see MPEP 2144.04).

Response to Amendment/Arguments

9. In the response filed on December 18, 2008 applicant amended claims 1-8, and submitted various arguments traversing the rejections of record. The examiner agrees that no new matter has been added.

10. The examiner agrees that the instant amendment overcomes the previous rejection over Croce. However, the newly amended claims are rejected in view of Hensel, Goldsmith, or Schatz as set forth above.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 7:30 am- 4:00 pm Mon-Wed.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

/J. M./
Examiner, Art Unit 1793

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February 27, 2009